

# Taxonomic notes on palms (Arecaceae) in catalogues of the Brisbane Botanic Garden, Australia, of 1875 and 1885

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## Summary

Dowe, John Leslie (2004). Taxonomic notes on palms (Arecaceae) in catalogues of the Brisbane Botanic Garden, Australia, of 1875 and 1885, *Austrobaileya* 6 (4): 967–972. Two catalogues of plants cultivated in Brisbane Botanic Gardens, Queensland, Australia, namely W. Hill's *Catalogue of the plants in the Queensland Botanic Gardens*, published in 1875, and F. M. Bailey's *Catalogue of plants in the two metropolitan gardens, the Brisbane Botanic Garden and Bowen Park (The Garden of the Queensland Acclimatisation Society)*, published in 1885, were studied in regards to palm nomenclature. Citations and notes are provided for the entries *Desmoncus minor*, *Jubaea speciosa*, *Pinanga smithii* and *Sagus blackalli*.

Keywords: Arecaceae, Brisbane Botanic Garden, W. Hill, F.M. Bailey

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## Introduction

While investigating the taxonomy of Australian palms for the Flora of Australia treatment, I examined two catalogues of the plants that were being grown in Brisbane Botanic Garden, Queensland, Australia. These catalogues, published in 1875 and 1885 respectively, listed both economically important and ornamental species. Each catalogue was prepared in a systematic format, with that by Hill (1875) arranged according to Lindley (1836), the *Natural System of the Vegetable Kingdom*, while the other by Bailey (1885) was arranged in the system of Bentham and Hooker (1862–1883) as used in their *Genera Plantarum*. Both catalogues were produced in hardbound editions and widely distributed. In this paper I will discuss the nomenclatural and taxonomic implications of names in publications such as botanic garden plant catalogues (see Mabberley, 1983; Ewan, 1993), with reference to the International Code of Botanical Nomenclature (ICBN) (Greuter *et al.*, 2000). The introduction and perpetuation of misapplied names, both legitimate and illegitimate, to some palms in a horticultural context, have been recognised (Moore, 1971; Zona, 1990). Four names of palms that appeared in Hill's catalogue are discussed, and their nomenclatural status reconciled.

## Walter Hill's Catalogue of 1875

Walter Hill (b.1820, d.1904) was appointed as the first Superintendent of Brisbane Botanic Gardens in 1855, first Queensland Colonial Botanist in 1859, and retained both positions until 1881 (Orchard, 1999). In Hill's (1875) catalogue, the palm family is termed '*Palmaceae*', the name used by Lindley (1836), but now considered an obsolete name. The total number of plant names included in the catalogue was about 10 000. This number comprised many hundreds of cultivar names. *Pyrus* and *Malus* cultivars alone numbered almost 300 entries. The catalogue presented information in a tabulated form with the column headings 'Systematic name, and authority'; 'English or local name'; 'Habit'; and 'Locality'.

The catalogue listed 155 names of palms in 44 genera. Of these 46 (30%) are valid names in current use. All but four of the remaining 119 names are recognised as validly published synonyms of otherwise valid names in current use. Therefore, 151 of Hill's names can be nomenclaturally reconciled. Three of the four names - '*Desmoncus minor* R. et P.', '*Jubaea speciosa* H. K.' and '*Sagus blackalli* W. H.' - do not appear on available taxonomic databases (Chapman, 1991; Index Kewensis, 1993; IPNI, 1999; APNI, 2001; TROPICOS, 2001); the fourth name, '*Pinanga smithii* W. H.', did not appear in either Chapman (1991) or APNI (2001), but was present in Index Kewensis

(1993) and IPNI (1999).

Names published in systematically arranged lists, such as Hill's catalogue, become part of the taxonomic literature and may be accounted for in subsequent accounts and revisions (Barker and Barker, 1990). However, the validity of a name is dependent upon there being a description that, ideally, allows recognition of the species, or if there is a reference to a specimen that provides identity for the name. Illegitimate names are rejected according to the rules in the ICBN (Greuter et al., 2000). However, such names may be accounted for in subsequent taxonomic treatments of Australian palms, albeit within the *nomina dubia et excludenda* section.

A search was instigated of the two herbaria, BRI and MEL, where Hill was known to deposit most of his specimens, but no specimens related to any of the obscure names were located. A search was also made of the records of the Brisbane Botanic Garden, but apart from the original citation in the catalogue, no further evidence of the names was revealed. In regards to those names in genera of American palms, i.e. *Desmoncus minor* and *Jubaea speciosa*, the records of the following herbaria were examined: MO, NY, TRIN and US.

### Frederick Manson Bailey's catalogue of 1885

Frederick M. Bailey (b.1827, d.1915) succeeded Hill as Queensland Government Botanist in 1881, a position that he held until 1915 (Orchard, 1999). In Bailey's (1885) catalogue, the palm family is referred to as the *Palmae*, a name now conserved along with *Arecaceae* as a valid alternative name (Greuter et al., 2000). The number of names in all families in Bailey's catalogue was reduced to about 3000, mainly due to the absence of cultivar names. However, it included additional information about the plants, with "...numerous notes on the properties and uses of the plants (are) a feature the compiler feels sure will be appreciated by a large number of persons, especially by those who take a utilitarian view of them". Unlike Hill's catalogue, Bailey's catalogue did not have a tabular format, but it did include utilisation notes following many entries, as well as concise information on habit and origin. Considering

the palms, Bailey included 91 names compared to Hill's 155, but more generic names, 57 as compared to 44. There were several reasons for these changes. A primary reason for the reduction in species names would have been due to the demise of those species that were culturally inappropriate for the warm temperate climate of Brisbane. Bailey had also implemented synonymy where required, and had adopted many of the new generic names that were the result of revisions that had been completed in the decade since Hill's catalogue was published. For example, the 13 species previously listed under the single genus name *Areca* in Hill's catalogue were subsequently included in seven genera in Bailey's catalogue, while the six species in Hill's *Kentia* were divided into five genera in Bailey's catalogue. These two genera alone accounted for an increase of ten generic names.

### Taxonomy and nomenclature

The decade 1875–1885 was one of considerable activity in Australian palm taxonomy. Wendland and Drude (1875) published the first detailed account of Australian palms in their *Palmae Australasicae*, Bentham (1878) published his account of palms in volume seven of *Flora Australiensis*, and Mueller (1875–1881) had entered his most active period of palm taxonomy. The nomenclatural changes introduced by these accounts were reflected in the names used in Bailey's 1885 catalogue, when compared to Hill's catalogue of ten years earlier. A comparison can be made between the numbers of names that are in current use that were used in each catalogue. Whereas only 30% (46 of 155) of the names that Hill used are in current use, 56% (51 of 91) of the names used by Bailey are in current use. For example, Hill listed *Ptychosperma elegans* under two names - *Pinanga smithii* and *Seaforthia elegans* - and *Caryota mitis* also under two names - *C. furfuracea* and *C. sobolifera*. However Bailey listed *Ptychosperma elegans* only once and under its 'new' name, and only *Caryota sobolifera* for the two *Caryota* names. Bailey adopted all the name changes in the accounts of Wendland and Drude, Bentham and Mueller, among others, and was also more conservative in his use of 'obscure' names than was Hill.

### Obscure and neglected names in Hill (1875)

‘*Desmoncus minor*, R. et P.’: in W. Hill, Catalog. pl. Brisbane bot. gard. 21 (1875), ‘evergreen climber, Trinidad’.

Attributing authorship of this name to Ruiz and Pavon, I propose, is an error. The palm taxonomy of these botanists is primarily confined to two publications (Ruiz and Pavon, 1794, 1798) in which they named 16 species (Henderson, 1995; IPNI, 1999). Their taxonomic activity occurred three decades prior to the establishment of *Desmoncus* by Martius (1824), so they could not have had any connection with the taxonomy of that genus using that name. According to Uhl & Dransfield (1987), *Desmoncus* has not received a recent critical revision, and much of the nomenclature of the genus is unresolved. Apart from appearing in Hill’s catalogue, the name also appears on a specimen held at TRIN. The specimen is *Broadway* 5568, the type for *Desmoncus prestoei* L. H. Bailey (= *D. polyacanthus* Mart.), collected in 1891 from a plant cultivated in the Trinidad and Tobago Botanical Garden. The name *Desmoncus minor* is therefore most likely related to plants growing in Trinidad and Tobago Botanical Gardens. Hill probably received material under this name from Trinidad as part of the exchange program with Brisbane Botanical Gardens.

Bailey (1943), in describing *Desmoncus prestoei* L. H. Bailey, noted that the name *D. minor* Prestoe appeared in “...the Hart catalogue [of 1908]... without description or comment...”, and was the name proposed by Prestoe for the *Broadway* specimen mentioned above. Bailey referred to *D. minor* as a *nomina nuda* and later (Bailey, 1947) as a “floating herbarium name”, and therefore determined that it could not be taken up either as a name or synonym. According to Article 7.1 [no type] and Article 32.1 [no diagnosis or reference to previous effective publication] in the ICBN, (Greuter *et al.*, 2000), the name ‘*Desmoncus minor*’ is to be rejected.

‘*Jubaea speciosa* H. K.’: in W. Hill, Catalog. pl. Brisbane bot. gard. 23 (1875), ‘evergreen tree, Mauritius’.

Kunth (1816) described *Jubaea spectabilis* Kunth (= *J. chilensis* (Molina) Baillon) for a species growing in Chile. A search of the available databases was unable to detect the combination ‘*Jubaea speciosa*’. The epithet ‘*speciosa*’ is suspected to be an orthographic misinterpretation of ‘*spectabilis*’. Plants of *J. chilensis* are extant in City Botanic Gardens, Brisbane, and are assumed to have been acquired during the years in question. According to Article 60.1 [incorrect spelling] in the ICBN, (Greuter *et al.*, 2000), the name ‘*Jubaea speciosa*’ is to be rejected.

‘*Pinanga smithii* W. H.’: in W. Hill, Catalog. pl. Brisbane bot. gard. 20 (1875); Scheffer, Ann. Jard. Bot. Buitenzorg 1: 154 (1876) [as *Pinanga smithii*]; J. D. Hooker, Bot. Mag. 3rd ser., 50: t. 7345 (1894); Martelli, Nuovo Giorn. Bot. Ital. ser. 2, 42: 72 (1935) = *Ptychosperma elegans* (R.Br.) Blume.

Type citation: ‘evergreen tree, Cape York’.  
Type: Cultivated plant in Brisbane Botanic Garden, not extant.

The name *Pinanga smithii*, included within the tribe *Areceae*, first appeared in Hill’s 1875 catalogue. Scheffer (1876, p. 154) related the name to *Ptychosperma elegans*: “...nous avons reçu ce palmier du jardin botanique de Melbourne, sous le nom de *Pinanga Smithii*.”. Scheffer provided a description based upon those plants. Subsequently, Index Kewensis did not reference the name to Hill, but to Scheffer.

Beccari (1885), in discussing palms that were growing in Bogor Botanic Gardens, reconfirmed the identity of *Pinanga smithii* as *Ptychosperma elegans*, though he described his specimen as a subspecies, *P. elegans* var. *sphaerocarpa* Becc. Beccari provided a diagnostic illustration that allows identification as *P. elegans*. Hooker (1894) subsequently used *P. smithii* in synonymy under an illustration of *P. elegans* in Curtis’s Botanical Magazine. The source material for the illustration was a plant in the Royal Botanic Gardens Kew, but its origin was not noted as there was no available record of its introduction. Hooker supposed that the epithet ‘*smithii*’ originated in “...some continental gardens to which a young plant had been contributed from Kew, and to which was

given the name of the late Curator of that establishment, whose success as a raiser of palms was famous". The Smith to whom Hooker most likely referred, was John Smith (b. 1798, d. 1888), the first curator of the Palm House at Kew (1841–1864) (Turrill, 1959; King, 1985; Minter, 1991). However, this version of the origin of the epithet appears to have been only speculation by Hooker. Hill and Scheffer did not provide any information in this regard. Hill indeed cited himself as the author in the first publication of the name.

The most recent use of the name was by Martelli (1935), who included it in a list of species names in the Areceae, but indicated that it was a synonym of *Normanbya muelleri* (W.Hill) Becc. (= *Normanbya normanbyi* (W.Hill) L.H. Bailey), a determination that was clearly incorrect. A search of the records of the Melbourne Botanic Gardens' living plant censuses, the National Herbarium of Victoria collection (MEL) and the index of plant names in the Mueller Correspondence Project, did not reveal the name *Pinanga smithii* (C. Coles and F. Anderson, pers. comm.). However, a specimen determined as *P. elegans* by Mueller in MEL, was despatched by Hill to Mueller in June 1875, and accompanied by a letter that described the palm as "...found by me at Cape York... the habit resembles the *Seaforthia elegans*, and grows about the same height."

In recent accounts, the name *Pinanga smithii* has ceased to be used, and it does not appear, to my knowledge, in any relevant taxonomic accounts after 1935 such as Moore (1963), Essig (1978), Chapman (1991) or APNI (2001). The name *Pinanga smithii* has evidently become neglected, but as a legitimate synonym should be included under *Ptychosperma elegans*, and with the following authorship, *Pinanga smithii* W.Hill ex. Scheff.

'*Sagus Blackalli* W. H.': in W.Hill, Catalog. pl. Brisbane bot. gard. 21 (1875), 'evergreen tree, Cape York'. It is probable that the etymology of this name was to honour Samuel Wensley Blackall, Governor of Queensland, 1868–1871.

The name *Sagus blackalli*, included within the tribe Calameae, was, to my knowledge, only ever used in Hill's catalogue, where it was noted as an 'evergreen tree, Cape York'. It is absent from all plant name databases known to me. It

is not known if Hill had intended to describe a species under this name, as no specimens or correspondence to that effect have been located.

*Sagus* Steck is now a synonym of *Metroxylon* Rottb. and *Sagus* Gaertn. a synonym of *Raphia* Beauv. The name *Sagus* was replaced by those new generic names many decades before Hill's catalogue appeared. This lends credence to the possibility that Hill had not intended to use *Sagus*, but he used that spelling inadvertently for another genus. One possibility is that he had meant to use the name *Saguerus* Steck, now a synonym of *Arenga* Labill. Wendland and Drude (1875) described *Saguerus australasicus* H. Wendl. & Drude (= *Arenga australasica* (H. Wendl. & Drude) S. T. Blake) from Cape York, but whether Hill had intended any connection with that genus, albeit as being misspelt, is not known. It is assumed that the monograph on Australian palms by Wendland and Drude (1875) was not yet available to Hill, although it cannot be discounted that he was aware of proposed manuscript names. Hill placed *S. blackallii*, along with two other species of *Sagus*, in the Tribe Calameae, which is the correct systematic placement for *Sagus* and its synonyms, whereas he placed his *Arenga* species in the tribe Areceae. If he had intended the name to be *Saguerus*, it would have been more than likely that he would have placed *S. blackalli* at least near *Arenga* in the list, as it was a systematic rather than alphabetic arrangement. However, without specimens or documentation, it is only speculation that Hill had intended otherwise. According to Article 7.1 [no type], Article 9 [identity ambiguous] and Article 32.1 [no diagnosis or reference to previous effective publication] in the ICBN, (Greuter *et al.*, 2000), the name '*Sagus Blackalli*' is to be rejected.

## Summary

Nelson (1990), in commenting on the taxonomic and nomenclatural implications of names published in plant catalogues and otherwise described from cultivated specimens, highlighted the problems that may arise when such publications are overlooked, particularly in relation to obscure names, or names that otherwise may have become neglected. Plant catalogues and similar publications cannot be ignored as sources of taxonomic and nomenclatural information.

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